

Docket No. 00-0700  
Staff Ex. 4.0

DIRECT TESTIMONY  
OF  
KAREN BUCKLEY

TELECOMMUNICATIONS DIVISION  
ILLINOIS COMMERCE COMMISSION

Illinois Commerce Commission  
Illinois Bell Telephone Company  
Unbundled Local Switching with Shared Transport  
DOCKET NO. 00-0700

March 06, 2001

ILLINOIS  
COMMERCE COMMISSION  
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CHIEF CLERK'S OFFICE

1   **Q.    Please state your name and business address.**

2   A.    My name is Karen Buckley and my business address is 527 East Capitol  
3       Avenue, Springfield, Illinois 62701.

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5   **Q.    By whom are you employed and in what capacity?**

6   A.    I am employed by the Illinois Commerce Commission as an Economic Analyst in  
7       the Telecommunications Division.

8  
9   **Q.    Please briefly describe your work duties with the Illinois Commerce**  
10       **Commission.**

11   A.    My responsibilities include analyzing tariff filings filed by telecommunication  
12       providers, providing written analysis for the Commission, and evaluating  
13       telecommunication provider applications for certification.

14  
15   **Q.    Please state your educational background.**

16   A.    I graduated from the University of Illinois in Springfield with a Bachelors degree  
17       in Accountancy in 1993. I obtained the Certified Public Accountant designation  
18       in the following year and the Certified Internal Auditor designation in 1999.

19  
20   **Q.    What is your work experience?**

21   A.    Since 1988, I have worked in the accounting and auditing field for private firms  
22       and government agencies. My primary expertise lies in financial reporting,  
23       internal control structures, and regulatory compliance audits.

24

25 **Q. Have you provided testimony in any other docketed case?**

26 A. Yes. I provided expert witness testimony in Docket 00-0552, the proposed  
27 reorganization between Citizens Communications Company, Global Crossing  
28 North America, Inc., and Frontier Communications Inc..

29

30 **Q. What is the purpose of your testimony in this proceeding?**

31 A. The purpose of my testimony is to address the 2001 Unbundled Local Switching  
32 with Shared Transport (ULS-ST) cost study, produced by the Network Usage  
33 Cost Analysis Tool (NUCAT) model. I will mention very little about Shared and  
34 Common costs because that issue will be addressed by Staff witness Judy  
35 Marshall, in Staff Exhibit 2.0.

36

37 **Q. Did you analyze the NUCAT model for tariffs other than ULS-ST?**

38 A. No. The NUCAT model has not been evaluated by Rate Staff prior to this  
39 docket.

40

41 **Q. Please describe your perception of the electronic cost model NUCAT.**

42 A. NUCAT is a model that generates consistent cost study data across various  
43 jurisdictions for various service types. The model takes output from other  
44 models, including Ameritech Regional Partners in Provisioning Switch Model  
45 (ARPSM), Common Channel Switching Cost Information (CCSCIS), Economic  
46 Cost of Network Services Program (ECONS) and other network data and

calculates costs for different services. There are five files in the model, four service specific files: Switched Access, Local Usage, IntraLATA Toll and Reciprocal Compensation, plus the "NUCAT Version 2-0 FINAL.xls" file. Each service file contains state specific input data which is updated semi-annually. The "NUCAT Version 2-0 FINAL.xls" allows for hyperlink interface to facilitate the creation of the cost studies.

**Q. How was the NUCAT model used in the ULS-ST cost study?**

A. The ULS-ST cost study consists of six rate elements, including ULS Switch Usage per MOU, ULS-ST Reciprocal Compensation per MOU, ULS-ST SS7 Signaling Transport per Message, ULS-ST Blended Transport Usage per MOU, Common Transport per MOU, and ULS-ST Tandem Switching per MOU, all of which utilize output from the NUCAT model. The first three elements are direct outputs of the NUCAT model and the other three are manually constructed using NUCAT output. The Company's Cost Analysts constructed Excel spreadsheets for different routing scenarios. Based on the activities involved in each scenario, the analysts took NUCAT generated cost components to calculate costs for each element.

**Q. What is the driving concept for the NUCAT model?**

A. It is a conversion of investment resources to activity costs, based on activities resources provided. The model assumes assets are usage sensitive which

69 result in unit cost per activity, per minute of use or per message. Then, unit  
70 costs become the basis for computation of various service costs.

71  
72 **Q. How does the NUCAT model generate unit costs for activities?**

73 A. The majority of the input to NUCAT is from other cost models. For example: unit  
74 investment costs are an output of the ARSPM model, annual cost factors (ACF)  
75 are from LFAM, conversation and non-conversation factors are from the CCSCIS  
76 model, while investment units and usage data are from company data bases. [It  
77 should be noted that ARPSM is being reviewed in this docket for UNE usage,  
78 and LFAM has been reviewed in Docket 98-0252/98-0335/00-0764  
79 (Consolidated) and found questionable for use in developing costs for retail  
80 usage.] NUCAT performs calculations using all the inputs to obtain per unit  
81 activity costs. A unit investment cost for End Office Setup per Message, for  
82 example, uses investment costs from ARPSM, multiplied by units in use,  
83 multiplied by a non-conversation ratio (22.19%) and ACF to determined the  
84 annual cost of total investment in providing the End Office Setup activity. Finally,  
85 the total investment is divided by annual usage to obtain the unit cost for End  
86 Office Setup per Message.

87  
88 **Q. To what extent did Staff investigate the NUCAT model?**

89 A. Staff was provided an electronic copy of the NUCAT model updated in April,  
90 1999. By following the technical manual, Staff learned the data flow within each  
91 of the four service categories. Staff also validated the NUCAT processing

consistency by performing sensitivity analyses on all four service files. However, Staff was unable to test the NUCAT Version 2-0 FINAL.xls because of inadequate hyperlink interface capabilities at the Staff location.

**Q. What steps did Staff take to ensure NUCAT output adequately represents cost of services to be paid by competitive carriers?**

A. For each activity cost NUCAT processed, the first step Staff undertook was to verify the inputs by tracing them to the source documents. Second, Staff evaluated the concept and formulas used in cost allocations to determine relevancy of the process. Third, some basic math footing and cross footing was performed to ensure accuracy. Finally, Staff reviewed the cost study as a whole to determine if it measures services in a just manner and that regulatory requirements are met.

**Q. Does Staff find the ULS-ST cost study reliable?**

A. Staff was impressed with the NUCAT infrastructure. It processes and produces consistent output quickly. However, as Staff traced input to referenced sources, problems were found. For example, the cost for ULS Switch Usage per MOU is \$0.000817 and the cost source is Tab 3.0c, Line c. In Tab 3.0c, Staff found that the UL Switch Usage per MOU involved a cost of \$0.001629 in the calculation for setting up a Local call. Staff traced to Tab 3.1 as referenced and identified item (k), \$0.000840 for billing and call center per message as being a component of

the local call setup activity. Then, Staff went to Tab 5.3 and 7.7 to find this source documented as the Ameritech 1999 study. The Shared and Common cost study was reviewed to determine if this particular cost was included. That study is based on 1997 costs. In addition, the annual charge factors used were based on year 2001 Maintenance factor.

**Q. What is Staff's opinion of the complex make up of the ULS-ST cost study?**

A. Staff believes the matching principle is violated. Generally, revenues and expenses are to match the period of occurrence. Even though specific requirements are provided by TELRIC or LRSIC, Staff believes a consistent starting base would greatly decrease the skepticism of the regulator and carriers.

**Q. Are there other uncertainties in the ULS-ST cost study?**

A. Yes. Staff is not comfortable with the usage sensitivity method of allocation of resource costs. My understanding is that existing contract agreements between Ameritech and vendors are based on the quantity of units rather than minutes of use. When Ameritech charges other carriers by minutes of use it does not adequately establish that costs increase based on usage.

**Q. Based on your analysis, do you agree that the NUCAT model develops proper usage costs for rate-setting purpose?**

136 A. Staff believes that NUCAT is effective in pulling data and generating cost  
137 studies. Staff does not believe NUCAT model represents appropriate usage  
138 costs for rate-setting purpose.

139

140 **Q. Does this conclude your testimony?**

141 A. Yes.